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California Department of Public Health Petition to Revoke Tetra Tech's State Radiological License

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11 **CALIFORNIA DEPARTMENT OF PUBLIC HEALTH**
12 **RADIOLOGICAL HEALTH BRANCH**

13
14 **IN RE: TETRA TECH EC, INC.**) **PETITION UNDER 17 C.C.R. § 30205**
15) **TO REVOKE TETRA TECH EC,**
16) **INC.'S CALIFORNIA**
17) **RADIOLOGICAL MATERIALS**
18) **LICENSE NO. 7909-01**

19 **I. INTRODUCTION**

20 Greenaction for Health and Environmental Justice ("Greenaction" or "Petitioner")
21 respectfully petitions the Radiological Branch of the California Department of Public Health to
22 revoke Tetra Tech EC, Inc.'s ("Tetra Tech" or "TtEC") California Radiological Material License
23 No. 7909-01. Revocation is warranted because Tetra Tech committed massive radiological fraud
24 in the remediation of the decommissioned Hunters Point Naval Shipyard ("Shipyard" or "HPNS")
25 in San Francisco, California, a Superfund site.

26 Revocation is the one clear remedy available to Petitioner to hold Tetra Tech accountable
27 for: the potential public health harm it has caused the community; the erosion of public faith in
28

1 the Navy's intention and ability to conduct a competent cleanup; and the betrayal of trust that the
2 government places in licensees who handle dangerous materials. Revocation is a just remedy for
3 Tetra Tech's unscrupulous conduct.

4 Tetra Tech was responsible for radiological remediation at the Shipyard, consistent with a
5 Superfund cleanup plan known as a Record of Decision ("ROD"). Rather than conducting a
6 proper cleanup, however, Tetra Tech: faked potentially thousands of soil samples, substituting
7 known "clean" samples to prove remediation had been completed when it had not; discarded
8 "dirty" samples; altered data to avoid further cleanup; used potentially contaminated soil as
9 backfill on the Shipyard; permitted potentially contaminated soil to be shipped offsite to locations
10 not permitted for radiological waste; and falsified building surveys to make them appear clean
11 enough for "free release."

12 There is no doubt Tetra Tech committed fraud. Petitioner herewith submits declarations
13 under penalty of perjury from multiple former Shipyard radiation workers admitting that they
14 themselves committed fraud under the direction of Tetra Tech supervisors. These whistleblower
15 declarations contain specific and credible evidence proving that the fraud was multi-faceted and
16 widespread, committed by numerous radiation-control workers under order of Tetra Tech's
17 management and took place over broad swaths of the Shipyard for many years.

18 The fraud was so extensive that when the U.S. Environmental Protection Agency ("US
19 EPA") and the California Departments of Public Health ("CDPH") and Department of Toxic
20 Substances Control ("DTSC") reviewed the Navy's analysis of Tetra Tech's data in December
21 2017, the regulators found the data "demonstrate a widespread pattern of practices that appear to
22 show deliberate falsification, failure to perform the work in a manner required to insure the ROD
23 requirements were met, or both." They also found "[e]vidence of data manipulation and/or
24 falsification" in many instances. The agencies determined that the Navy's review of Tetra Tech's
25 data greatly underestimated the evidence of potential fraud. In one parcel, regulators concluded
26 that fully **97% of the data was questionable**; in another, a "mere" **90% was**. In other words,
27 they found that virtually all of Tetra Tech's data are compromised.

28 Punctuating these developments and buttressing the whistleblower declarations, two of

1 Tetra Tech’s radiation control supervisors, Justin Hubbard and Stephen Rolphe (whose roles in
2 the fraud are detailed below) have pleaded guilty to federal charges of falsifying radiological
3 sampling documents. On May 3, 2018, they were each sentenced to eight months imprisonment
4 and ordered to pay fines.¹ Additional charges may be forthcoming.

5 In the face of this overwhelming evidence, the Navy has finally done a complete about-
6 face. For years, it insisted the fraud was extremely limited and a substantial majority of Tetra
7 Tech’s data was reliable. Now, however, the Navy has finally agreed that none of Tetra Tech’s
8 data can be relied on and the entire radiological remediation project – all 12 years and \$250
9 million of it – has to be started over from scratch.²

10 It has taken the Navy 6 long years to change course.

11 Starting in 2012 and continuing until 2018, the Navy, the US EPA, the Nuclear
12 Regulatory Commission (“NRC”) and California agencies were aware of the fraud yet simply
13 accepted Tetra Tech’s assurances that only a few soil samples were involved. But for the efforts
14 of Greenaction and the whistleblowers over the past two years, the extent of the fraud now finally
15 acknowledged by the Navy and regulators would not have been exposed. But for Petitioner’s
16 public spotlight on the true extent of the fraud, the City of San Francisco would have allowed still
17 radioactively-contaminated areas to be released for development, possibly exposing tens of
18 thousands of residents and visitors to harmful radiation for generations to come.

19 Tetra Tech committed widespread radiological fraud at a Superfund site in a
20 neighborhood long known to be burdened by serious pollution. Tetra Tech’s fraudulent conduct,
21 in abject disregard for the health and safety of current and future residents, provides ample
22 justification for revoking its state radiological license. The company’s cover up – falsely insisting
23 the fraud was limited to a few rogue employees – has jeopardized the integrity of the cleanup,
24 delaying it up by years and likely costing taxpayers hundreds of millions of dollars on top of the
25

26 ¹ Exhibit 1, *Radiation Control Technician Supervisors Sentenced for Falsifying Former Hunter’s Point*
27 *Navan Shipyard Clean-Up Records*, Press Release, US Attorney, Northern District of California, May 3,
28 2018.

² Exhibit 2, *Declaration of Steven J. Castleman*, June 25, 2018.

1 hundreds of millions of dollars it already paid Tetra Tech.

2 Revocation of Tetra Tech’s state radiological license is critical not only to hold Tetra Tech
3 accountable for its wrongful conduct, but also to deter other radiological license holders from
4 committing similar frauds, thereby protecting all California communities.

5 6 **II. PARTIES**

7 Greenaction is a San Francisco based, multiracial organization founded and led by
8 grassroots leaders from urban, rural and indigenous communities impacted by pollution and
9 injustice. Greenaction files this petition seeking the revocation of the state license on behalf of its
10 members living in Bayview Hunters Point and other Bay Area communities impacted and
11 threatened by pollution at the Hunters Point Shipyard Superfund Site

12 These communities are particularly affected by pollution. CalEnviroScreen 3.0 is the
13 Office of Environmental Health Hazard Assessment’s (“OEHHA”) “screening tool used to help
14 identify communities disproportionately burdened by multiple sources of pollution and with
15 population characteristics that make them more sensitive to pollution.”³ CalEnviroScreen rates
16 the seven census tracts that make up Bayview Hunters Point and abut the Shipyard as among the
17 most negatively impacted by pollution; from a low rating of 76 to a high of 95 on a 100-point
18 scale in which the higher the score the worse the conditions.⁴ Greenaction has long worked with
19 these communities to reduce and eliminate pollution.

20 On June 29, 2017, Greenaction filed a petition with the U.S. Nuclear Regulatory Agency
21 (“NRC”) seeking to revoke Tetra Tech’s federal license. Greenaction has supplemented the
22 petition twice as scrutiny of Tetra Tech’s data has uncovered yet more evidence of extensive
23 fraud, as further described further in Part II.C (Data Review) below.⁵ The NRC petition is still
24 pending and Tetra Tech continues to hold a federal license.

25 ³ <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>

26 ⁴ <http://oehha.maps.arcgis.com/apps/View/index.html?appid=c3e4e4e1d115468390cf61d9db83efc4>

27 ⁵ The NRC Petition, Exhibit 3 hereto, all supporting exhibits are available at:
28 https://www.dropbox.com/sh/1gfn7ja0fc3c5l6/AAD7-9qzmbhhUTkGvpN4p_Xua?dl=0.

1 Tetra Tech, Inc. is a worldwide company with corporate headquarters in Morris Plains,
2 New Jersey. Tetra Tech EC, Inc. is a wholly owned subsidiary of Tetra Tech, Inc. and is based in
3 Pasadena, California.

4 Tetra Tech EC, Inc. contracted with the United States Navy to perform remediation of
5 radioactive materials at the decommissioned Hunters Point Naval Shipyard in San Francisco.
6 Tetra Tech initially hired New World Environmental Inc., a radiological staffing firm, as a
7 radiological subcontractor. Subsequently, on or about April 2009, Tetra Tech invoked its first-
8 ever use of its own NRC-issued Materials License, No. 29-31396-01, and the company became
9 directly responsible for radiological work at the Shipyard.

10 Tetra Tech also obtained a California Radiological Material License, No. 7909-01.
11

12 **III. STATEMENT OF FACTS**

13 **A. Initial Discovery of Fraud**

14 The Shipyard was contaminated decades ago with radiation from numerous sources. A
15 radiological lab was onsite, for example, that conducted research on the effects of radiation
16 exposure. The Navy used radioactive radium paint and glow-in-the-dark radium markers on
17 ships, many of which were removed during work at the Shipyard. Numerous ships that
18 participated in atomic bomb testing in the South Pacific were sandblasted and repainted at the
19 Shipyard, resulting in large quantities of radioactively-contaminated sand being disposed of there.
20 And radioactively-contaminated fuel from those ships was burned at the Shipyard.

21 As mentioned above, Tetra Tech was hired by the Navy to identify and remediate
22 contamination exceeding the “free release” level set by regulators.

23 In 2012, while reviewing post-remediation soil sample results, the Navy’s Radiological
24 Affairs Support Office (“RASO”) discovered “anomalies” in some of the soil samples Tetra Tech
25 submitted. There were discrepancies between the first two sets of systematic sample results from
26 the footprint of former Building 517 (“B517”)⁶ and the third set taken post-remediation from that

27 ⁶ Building 517 had previously been used as a brig (jail) and the Naval Radiological Defense Laboratory
28 Cobalt Animal Irradiation Facility. The NRC Petition is Exhibit 3 to this Petition.

1 site: “These results reported low potassium-40 (“K-40”) sample activity (i.e. < 5 picocuries per
2 gram) coupled with low activity for radium 226 (“Ra-226”), bismuth-214 (“Bi-214”) and lead-
3 214 (“Pb-214”) in 36 out of 36 samples.”⁷ The low levels of K-40, Ra-226, Bi-214, and Pb-214
4 did not match the radiological “fingerprints” of the first two systematic samples and thereby
5 indicated potential fraudulent sampling and reporting.

6 RASO’s discovery led to Tetra Tech conducting an internal “investigation” resulting in a
7 report entitled, *Investigation Conclusion, Anomalous Soil Samples At Hunters Point Naval*
8 *Shipyards, Revision 1* (“Anomalous Samples Report”), dated April 2014, and incorporated herein
9 as Exhibit 4. In the report, Tetra Tech conceded that the “anomalous,” that is to say fraudulent,
10 samples were not taken from the areas that were identified, and speculated the samples could
11 have been taken from two areas of the Shipyards: “Either the former Building 707 Triangle Area
12 or the Building 253/211 drill cuttings, or a combination of both, may have been used as substitute
13 soil samples; however, the investigators were unable to conclusively determine a source.”⁸

14 The low K-40 results were not the only obvious indication of fraud. Another was the
15 sample’s uniform physical characteristics: “One clear feature is that the samples from the third set
16 of systematic samples do not appear similar in color to any of the other systematic samples, and
17 all of the samples within the set look extremely similar, if not identical. This color uniformity
18 coupled with the homogeneity of the low K-40, Ra-226, and progeny concentrations . . . led the
19 investigators to conclude that the soil samples were not collected from B517.”⁹ These physical
20 differences, together with different radiological “fingerprints,” raised the prospect that the post-
21 remediation samples were taken from a different location from that claimed on chain-of-custody
22 (“COC”) documents.

23 In fact, examination of the COCs alone substantiates fraud. Proper procedure calls for
24
25

26 ⁷ Exhibit 4, *Investigation Conclusion Anomalous Soil Samples at Hunters Point Naval Shipyards, Revision*
27 *1*, (April 2014) and Attachments at ES-1.

28 ⁸ *Id.* at ES-2.

⁹ *Id.* at 15.

1 samplers to note the correct time and location for every sample.¹⁰ However, COCs for anomalous
2 samples purport they were collected in exact five-minute intervals, precisely on the five-minute
3 mark. For example, COCs for samples which identify Jeff Rolfe as the sampler claim he took 8
4 samples (Nos. 03707-S0016-F079-01 through 03707-S0016-F086-01) on June 7, 2011 at 13:40,
5 13:45, 13:50, 13:55, and every five minutes thereafter, exactly, until 14:15. The next day, COCs
6 claim he took 20 samples (03707-S0009-F059-01 through 0307-S0009-F078-01) every 5 minutes
7 from 8:15 am until 10:20 and an additional 20 samples (03707-S0017-F064-01 through
8 03707-S0017-F083-01) every 5 minutes from 10:30 a.m. until 12:05 p.m.¹¹

9 Similarly, COCs for 20 samples (No. 02-NPR-S0007-F030-01 through 02-NPRS0007-
10 F049-01) purportedly taken by Justin Hubbard, a Health Physicist (“HP”) supervisor, claim he
11 took them on June 4, 2012 at: 13:00; 13:05; 13:10 and exactly five minutes thereafter until
12 14:35.¹²

13 According to experienced HPs, however, soil samples cannot be taken with such rigid
14 regularity. The need to prevent cross-contamination of samples and sampling equipment from one
15 sample location to another precludes it; HPs need to follow exacting practices to decontaminate
16 all sampling equipment between samples, making five-minute intervals impossible.¹³ Indeed, in
17 an interview of Justin Hubbard conducted by Tetra Tech in connection with the *Anomalous*
18 *Samples Report*, Hubbard noted that “[o]ne sample could take 40 minutes.”¹⁴

19 Other COCs claim samples were taken precisely every three minutes without deviation.
20 For example, 18 samples purportedly taken by Joe Cunningham (Nos. 02-PCT-302-005 through
21 02-PCT-302-022) on May 22, 2012 were supposedly taken at 10:00; 10:03; 10:06; 10:09; 10:12;
22 10:15; 10:18, and continuing exactly every three minutes thereafter until 10:51.¹⁵

23
24 ¹⁰ See Exhibit 5, U.S. Navy Base Realignment and Closure Program Management Office West, *Base-Wide Radiological Work Plan, Revision 1, Hunters Point Shipyard, San Francisco, CA* (Oct. 5, 2007).

25 ¹¹ Exhibit 6, Attachment 15, *Chain-of-Custody Sheets, Gamma Survey Records, and Ancillary Information Associated with Survey Units Containing Anomalous Soil Sample Results*, at 419.

26 ¹² *Id.* at 64.

27 ¹³ Exhibit 7, *Declaration of Anthony Smith*, at ¶¶ 21-23; Exhibit 14, *Declaration of Albert Bowers*, at ¶ 73.

28 ¹⁴ Exhibit 8, Attachment 9, *Personnel Interviews*, at 7.

¹⁵ Exhibit 6 at 789-790.

1 To Petitioner’s knowledge, neither Tetra Tech nor the Navy has ever offered an
2 explanation for these dubious patterns on the COCs. However, former radiation worker Anthony
3 Smith explained the COCs were filled out in advance – including the time of sampling and who
4 took the sample – by someone other than the actual sampler, calling into question the entire
5 sampling and documentation process.¹⁶

6 COCs also reported that samplers took more samples than was physically possible and
7 that HPs were in two places at once. When interviewed by Tetra Tech, “both Justin Hubbard and
8 Ray Roberson stated that collection of more than two sets of systematic samples in one day would
9 be difficult.” But “Roberson was listed on chains of custody for four sets of systematic samples
10 from the North Pier, which is extremely rocky and difficult to sample, as well as an additional
11 trench segment survey unit, all on May 31, 2012.”¹⁷ Even more remarkably, Roberson (who has
12 since died) supposedly collected soil samples at Survey Unit 304 “at the same time he was listed
13 as collecting soil samples at North Pier Survey Unit 11.”¹⁸

14 False samples were also taken over a lengthy period of time. According to the COCs in
15 Attachment 15 to the *Anomalous Samples Report*, the earliest listed phony samples were taken on
16 March 4, 2011 (Nos. 03707-S0016-F050-01 and 03707-S0016-F057-01), while the latest were
17 taken nearly a year-and-a-half later, on August 15, 2012 (Nos. 03707-S0022-F056-01 through
18 03707-S0022-F080-01). Former employees say the COC fraud went on even longer, beginning
19 before 2009 and continuing until at least late September 2012.¹⁹

20 To this day, Tetra Tech has neither acknowledged the breadth and scope of its wrongdoing
21 nor that it was directed by its onsite Project Manager and Construction Superintendent. Indeed, on
22 April 24, 2018, Tetra Tech’s Chairman and CEO, Dan Batrack, wrote to the Navy that the
23 company “vehemently denies that such allegations are representative of Tetra Tech’s actions at
24 the site” and it “stands by its work.”²⁰

25 ¹⁶ See Exhibit 7 at ¶¶ 21-23.

26 ¹⁷ Exhibit 8 at ¶11.

27 ¹⁸ *Id.* at 16.

28 ¹⁹ Exhibit 7 at ¶¶ 7, 15-20.

²⁰ Exhibit 9, Tetra Tech Chairman and CEO, Dan Batrack’s April 24, 2018 letter to the Navy.

B. Types of Fraud

Until the whistleblowers came forward the full extent of the fraud remained hidden from public view. Greenaction's NRC petition and its supporting whistleblower declarations demonstrate that Tetra Tech employees and the radiological subcontractors it directly supervised were involved in at least six types of fraud over a period of years.

(1) fake sampling, in which soil samples – potentially thousands of them – were reported to have been taken at one location when they were actually taken from another;

(2) discarding samples and analytical results when they came back too “hot” (i.e., above the cleanup standard);

(3) altering scanning data to make them appear acceptable;

(4) conducting false building surveys in which certain scan results were fabricated and others were falsified;

(5) remediating radioactive material in soil improperly, resulting in potentially radioactively-contaminated soil being shipped offsite as well as being used as backfill for trenches at the Shipyard; and

(6) altering Portal Monitor procedures so potentially radioactively-contaminated soil was allowed to be shipped offsite for commercial purposes to places unknown.

1. Fake Soil Sampling: Parcels C, D, E

Senior HP Anthony Smith stated that fake sampling took place in two stages. At first, HPs were directed to take samples from the general site intended to be sampled, but to falsify the specific location.²¹ However, that did not result in “clean-enough” samples so HPs were then directed to secure samples from more distant locations known to be clean.

a. Fraudulent Sampling - Stage 1

As Tetra Tech's own *Anomalous Samples Report* concedes, samples purportedly taken from the footprint of former Building 517 (Parcel D) were actually taken from a different location. According to former employees at the Shipyard, B517 was not the only place from

²¹ Exhibit 7 at ¶¶ 15-16; *see also* Exhibit 10, *NRC Investigation Report*, 6.

1 which samples were faked. Phony samples supposedly taken from various sites on the Shipyard,
2 including the areas around Building 707 (Parcel E), the 500 Series of buildings (Parcel D), and
3 Parcel C,²² were actually taken elsewhere.

4 When HPs were tasked with soil sampling, proper procedure was for them to initially scan
5 the soil seeking radioactive hot spots. The scanning data were used by engineers to identify
6 locations of high radioactivity and then to plot out their locations on a map, with the highest
7 readings delineating where soil samples should be taken.

8 HPs followed the correct procedure in the early years at the Shipyard. But that practice
9 changed in the latter part of 2008 or early 2009. At that time, Tetra Tech was having difficulty
10 obtaining free releases, i.e., approval that cleanup was demonstratively successful; post-
11 remediation samples came back too “hot.”

12 In response, HPs were ordered by their supervisors not to take the samples from the spots
13 marked by the engineers as the highest radioactive-reading spots. Rather, the HPs were told to
14 make it appear they took the samples from the marked spots, but to actually take the samples
15 from clean areas close by.²³ An HP (also known as a Radiation Control Technician “RCT”)
16 admitted this form of fraud to the NRC: “the RCT stated that, when sufficiently low
17 contamination levels were not obtained, the Radiation Task Supervisor (“RTS”) would direct the
18 RCT to move 5 to 10 feet in another direction and obtain a new sample from that location.
19 Meanwhile, the new sample would be represented as having been obtained from the original,
20 specified location.”²⁴ These close-by phony samples would be expected to have the same K-40
21 levels as other samples from the area and might not involve K-40 activity below 5 picocuries.
22 Thus, there is a strong likelihood that the Navy and regulators could not identify substantial
23 numbers of fraudulent samples by focusing solely on the K-40 levels.

26 ²² See Exhibit 10, *NRC Investigation Report*, at 1, 6 (findings of fraudulent soil samples from Parcel C).

27 ²³ See Exhibit 7 at ¶ 15.

28 ²⁴ Exhibit 10 at 6.

1 **b. Fraudulent Sampling – Stage 2**

2 Repeatedly the fraudulent post-remediation soil samples resulted in laboratory results with
3 radioactive contamination above the free-release levels. For example, around Building 707
4 repeated rounds of remediation failed to decontaminate all the soil; successive post-remediation
5 samples came back too “hot.” When sample results exceeded the free-release levels, Tetra Tech
6 was required to do more clean-up, which cost time and money.²⁵

7 Due to the frustration of Tetra Tech’s attempts to obtain free release and the desire to cut
8 costs to increase profits, the manner of the fraud changed. HPs were directed by their supervisors
9 to obtain false samples nowhere near the area intended to be sampled, but rather in at least three
10 remote locations known from prior sampling to contain “clean” soil. Tetra Tech management
11 pressured its supervisors to have the HPs engage in fraudulent sampling that would guarantee lab
12 results under the free release levels so it could get fully paid without incurring the full costs of the
13 cleanup.²⁶

14 Former employees, like Senior HP Anthony Smith, state that he and others took the
15 second-stage type of fraudulent samples from at least three locations known to be low in
16 radiological activity. The specific location was chosen depending on the type of soil they were
17 trying to match.²⁷

18 If HPs needed to match “green serpentine”²⁸ soil, Smith and others took false samples
19 from one of two locations. Originally, the green serpentine soil used to submit false samples was
20 taken from a sewer trench in front of the Building 500 series of buildings. That site was
21 supplanted by a second one, an area inside the remains of the foundation of an old movie theater
22 in the 500 series area. According to Smith, the theater foundation was preferable to the sewer
23 trench because it afforded greater privacy – employees could take samples there unseen when

24 ²⁵ See Exhibit 7 at ¶¶ 16-19; Exhibit 14 at ¶¶ 11-12.

25 ²⁶ See Exhibit 75 at ¶¶ 16-17.

26 ²⁷ *Id.* at ¶ 18.

27 ²⁸ Exhibit 11, Attachment 1, *Site Conceptual Model for Low K-40 Soil*, at 1 (“As mapped by the United
28 States Geological Survey (USGS), the upland portion of the Shipyard consists of Franciscan bedrock and
includes serpentine, chert, altered volcanic rocks, and interbedded sandstones and shales.” The serpentine
rock and soil derived from it at the Shipyard has a slight green tint.).

1 inside the foundation walls. Smith says he would wait until laborers not involved in the fraud
2 went to lunch or left for the day and he would then fill a 5-gallon bucket with soil from the theater
3 site which he knew to be clean.²⁹

4 If HPs needed to match sandy soil, they would fill five-gallon buckets with soil taken
5 from an area under two palm trees in the vicinity of an old pump house (Building 521) that was
6 also near the old movie theater foundation.³⁰

7 **c. Substituting Clean Soil for Potentially “Hot” Soil**

8 Senior HP Smith states he would take the five-gallon buckets of either green serpentine or
9 sandy soil to the Conex (a shipping container that acted as a temporary field office), where HP
10 supervisor Steve Rolfe, his wife HP Tina Rolfe, and HP Rick Zahensky would transfer the soil
11 into sample containers to substitute for real samples. The original, potentially “hot” samples,
12 would be emptied into another 5-gallon bucket, and Smith would dump that soil into open
13 trenches that had been dug for sewer removal. In short, the true soil samples were switched with
14 the soil known to be radiologically clean with the intent to fraudulently “prove” to the Navy,
15 regulators, and the public that all radiological hazards had been removed.

16 Smith estimated this type of false sampling happened “pretty much every day” over at
17 least the last one-and-a-half years he worked at the Shipyard. He stated fake soil samples he took
18 from all three sites – the sewer trench, the palm tree site and the theater – resulted in 800 to 1,000
19 false samples.³¹ Other HPs on the team under Smith’s supervisor, Steve Rolfe, also regularly
20 engaged in taking false soil samples, as did HPs under the supervision of Justin Hubbard.³²

21 Samples were switched not just from the former site of Building 517, as the *Anomalous*
22 *Samples Report* acknowledged. Smith averred he switched samples taken from the area around
23 the Building 707 “Triangle Area” in Parcel E, and the area of the former 500 series of buildings in
24

25 ²⁹ Exhibit 7 at ¶ 18.

26 ³⁰ See Exhibit 12, *HPNS Map of Parcel A Sample Location* (map of Hunters Point Naval Shipyard
identifying buildings by number).

27 ³¹ See Exhibit 7 at ¶ 19.

28 ³² *Id.* at ¶ 20.

1 Parcel D.³³ Other areas had falsely switched samples taken by HPs other than Smith, as reflected
2 in the *Anomalous Samples Report*, including the North Pier and structures referred to as “shacks”
3 79 and 80.

4 According to the whistleblowers, the fraudulent practices escalated in the years after Tetra
5 Tech’s contract with the Navy changed from a time-and-materials contract to a firm fixed-price
6 contract.³⁴ This change apparently motivated the fraud: the less time and resources Tetra Tech
7 spent on sampling and cleanup, the more profit they would make.³⁵

8 It is not clear if the switched soil samples taken from the 500 series trench, the old theater
9 foundation and the two palm trees *all* had low K-40 activity or if one or more did not. If any of
10 these locations had naturally-occurring K-40 activity over 5 picocuries, samples taken from them
11 could not be identified as “anomalous” based on low K-40 readings. The number of fraudulently
12 switched soil samples could thus be greatly underestimated.

13 **2. Destruction of “Hot” Soil Samples and Their Records**

14 **a. Building 351A**

15 Building 351A had been used by the Navy's Radiological Defense Laboratory for decades
16 conducting extensive experiments with hazardous radionuclides. It was one of the last buildings
17 in Parcel G that had not been free released. Clearance of building 351A was holding up final
18 payment to Tetra Tech for all of the work the company had done in that parcel, potentially
19 millions of dollars.³⁶

20 Direct readings from radiological survey detection instruments indicated the presence of
21 elevated radioactivity in a large amount of soil in a crawl space under Building 351A.
22 Remediation attempts within the crawl space were performed in 2008 by a group of laborers who
23 dug up the soil while HPs Anthony Smith and Josh Hooper monitored them. The laborers used
24 pick axes, shovels and trowels to loosen the soil and a large vacuum truck that sucked the soil
25

26 ³³ *Id.* at ¶ 17.

27 ³⁴ *Id.* at ¶¶ 7-11, 16, 34.

28 ³⁵ Exhibit 14 at ¶¶ 6, 11-13.

³⁶ Exhibit 7 at ¶ 8.

1 from under the building through an 8-inch hose. The soil was ultimately placed in bins to be
2 disposed offsite as radioactive waste.³⁷

3 At the conclusion of approximately two weeks of remediation, HPs Anthony Smith and
4 Josh Hooper took post-remediation soil samples from the crawl space in an attempt to
5 demonstrate that there was no longer any residual radiological contamination above established
6 free-release levels. However, a post-remediation sample came back too “hot,” demonstrating the
7 radioactive cleanup had not been successfully completed. Proper procedure mandated another
8 round of soil removal. This additional round of remediation would once again involve laborers
9 and a vacuum truck, followed by another round of post-remediation sampling. However, Tetra
10 Tech’s management directed that proper procedures be ignored.

11 Smith and Hooper were summoned to a meeting that included Bill Dougherty, Tetra
12 Tech’s Project Manager, and Dennis McWade, Tetra Tech’s Construction Superintendent, among
13 other senior Tetra Tech and sub-contractor managers. Speaking of the vacuum truck, Dougherty
14 told Hooper and Smith, “Do you know how much that machine cost to rent for two weeks? We
15 can’t afford to do that again, get rid of that sample,” or words to that effect. McWade gave Smith
16 the containerized sample and its COC document, completely contrary to acceptable procedures,
17 and Smith and Hooper did what they were told. They got rid of the sample and the COC record.³⁸

18 Thereafter they engaged in the first type of soil-sampling fraud described above and took
19 a false sample under Building 351A. Tetra Tech had its engineers mark the areas under the
20 building that were known to be *clean* so that Smith could be assured he would not obtain another
21 soil sample that came back too “hot.” Smith says he understood, based on what his supervisors
22 told him, that Tetra Tech wanted to get free release of the building despite the remaining
23 contamination so Tetra Tech would get paid the final installment for its work in Parcel G.³⁹

24 Tetra Tech then submitted false documents to the Navy claiming that Building 351A had
25 been properly cleared of all radioactive material above release levels, when significantly elevated

26 ³⁷ *Id.*

27 ³⁸ *Id.* at ¶¶ 10-11.

28 ³⁹ *Id.* at ¶ 11.

1 radioactivity, beyond free-release levels, was known to still exist in the crawl space under the
2 building. The radioactive contamination was not remediated over the next three-plus years that
3 Smith continued to work at the Shipyard. To the best of his knowledge it never has been.
4 Smith states that the soil sample from under Building 351A was the first instance where he was
5 told to get rid of a sample.⁴⁰ As further described below, it was not the last.

6 **b. Parcel A Background Sample**

7 In July or August 2009, Tetra Tech was about to start, or had just started, a project to
8 remove sewer lines from under Fisher Avenue and Spear Streets in Parcel C. Smith was directed
9 by Hubbard to obtain a background reference sample (i.e., a sample known not to be radioactively
10 contaminated) for the Spear/Fisher sewer projects. Smith had been told that Parcel A was never
11 used for any industrial purpose, that it was deemed by the Navy to be free of contamination and,
12 as a result, had been transferred to the City of San Francisco for development in 2004. Because of
13 its close proximity to the Fisher/Spear project and assuming Parcel A was clean, Smith
14 determined it would be an appropriate place to obtain a background sample.⁴¹

15 Smith proceeded to a location just north of the intersection of Fisher Avenue and Spear
16 Street.⁴² On the north side of the road next to Fisher Avenue and just beyond the sidewalk, there is
17 a concrete wall which descends in height as it extends west and parallel to Fisher Avenue.
18 Beyond the wall is a hill that rises to the top of Parcel A. Just before the stop sign at the
19 intersection of Fisher and Spear (i.e., just northeast of the intersection) and approximately 20 feet
20 from a light pole on the north side of Fisher Avenue, the wall was about waist-high for Smith.
21 Because of how the hill rose behind the wall, Smith was able to reach over the wall and use a
22 trowel to take a sample without bending over. He dug a hole about 6 inches deep in the hillside
23 and took a sample from the bottom of the hole. He gave the sample to Justin Hubbard, who took it

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⁴⁰ *Id.*

27 ⁴¹ *Id.* at ¶ 12.

28 ⁴² In Exhibit 12, the location of Anthony Smith's Parcel A sample is marked in red.

1 to the laboratory. In a violation of proper procedure, there was no chain-of-custody document
2 accompanying the sample.⁴³

3 The next day, Hubbard approached Smith and had the sample with him. In the presence of
4 HPs Jeff Rolfe, Ray Roberson and Carey Bell, Hubbard told Smith the sample had come back
5 “hot.” Hubbard said it contained 2 to 3 picocuries per gram of cesium-137, which Smith knew
6 was much higher than background levels and the cesium-137 cleanup standard of 0.113
7 picocuries per gram – 18 to 26 times higher than the set health and safety ceiling. Hubbard gave
8 the sample to Smith and told him to “get rid of it and not say a word,” or words to that effect.
9 Smith took the sample back to the site where he had taken it and put the soil back in the hole he
10 created earlier for taking the sample. He disposed of the plastic sample container by putting it in a
11 bin set aside for radiological waste. That same day, Smith took a different sample, to be used as
12 the background sample, from a distant site on the Shipyard he knew to be clean from prior
13 sampling and analysis.⁴⁴

14 To the best of Smith’s knowledge, the soil contamination he discovered in Parcel A was
15 never thereafter remediated for cesium-137 or other potential radioactive contaminants.⁴⁵

16 **c. Radioactive Fencing**

17 Tetra Tech established fenced-off areas within the Shipyard to separate locations known
18 to contain radioactive contaminants from other areas that were not contaminated. These areas
19 were referred to as Radiologically Controlled Areas or (“RCAs”). Much of the fencing used to
20 establish the RCAs was rented from private companies. In 2009, a large amount of fencing that
21 had established the perimeter of an RCA was no longer needed. Tetra Tech directed HPs to scan
22 the metal fencing panels for clearance to release the fencing to the rental company. Susan
23 Andrews, a Senior HP, along with two other HPs, scanned the fencing with radiation detection
24 field instruments. During the scanning, Tetra Tech Construction Superintendent McWade
25

26 ⁴³ Exhibit 7 at ¶ 12.

27 ⁴⁴ *Id.* at ¶ 13.

28 ⁴⁵ *Id.* at ¶ 14.

1 pressured the HPs to scan the fence quickly to obtain its release so it could be returned to its
2 owner.⁴⁶

3 Andrews' scanning detected significant radiation on the fence, what she termed
4 "screaming hot." The fencing had apparently become infused with radioactive contaminants due
5 to the length of use on the Shipyard. In an effort to be sure of her scan results, Andrews asked for
6 HP Phil Poole's sensor to scan the same fence panels. The scan with Poole's sensor registered the
7 same high radioactive readings. She then asked for HP Bob Evan's sensor and scanned the same
8 fence panels, again getting the same "screaming hot" readings, far above release levels.

9 Proper procedure required that the fencing be put into an RCA because any radioactive
10 material was required to be confined there. However, Construction Superintendent McWade
11 refused to allow the fencing to be put into an RCA.⁴⁷

12 Andrews completed her scanning and smears (i.e., swab samples) of the fencing.
13 Following proper procedure, she took the scan meter and the smears to the lab at the Shipyard and
14 turned the material in. The next day, Tetra Tech alternate Radiation Safety Officer Representative
15 ("RSOR") Charles Taylor told Andrews that the lab results from the smears she had submitted
16 tested high for radioactivity, beyond free-release levels. Taylor informed Andrews that the sensor
17 readings also showed elevated radioactivity above release standards. Andrews reviewed the lab
18 results and the sensor readings, confirming the high radioactivity.⁴⁸

19 Taylor told Andrews that Tetra Tech would not treat the fencing as radioactively
20 contaminated despite the lab results and sensor readings. RSOR Taylor ordered Andrews to go to
21 the laboratory and obtain the smears from the fence and their associated records and destroy
22 them. Taylor also ordered Andrews to delete the records of the elevated readings from her sensor
23 and from the Tetra Tech computer, or else she would be fired. Andrews received this order in the
24 presence of her supervisor Rhonda Richardson, who expressed concern that if these orders were
25 not followed that both Andrews and she might be terminated. At no time did Richardson object to

26 ⁴⁶ Exhibit 13, *Declaration of Susan Andrews*, at ¶ 30.

27 ⁴⁷ *Id.*

28 ⁴⁸ *Id.* at ¶¶ 31-32.

1 Taylor's orders or contend that the destruction of legitimate lab results and instrument readings
2 was improper.⁴⁹

3 Andrews did what she was told. She went to the lab, obtained the smears and records and
4 destroyed them. Andrews had worked in the lab previously, for about 4 years, and was familiar
5 with the computer system, called "Access." Andrews erased the sensor readings from the
6 computer but believed, from her experience and training, that her efforts did not erase them from
7 the computer's hard drive, meaning a competent investigator might still be able to locate the
8 records. Andrews subsequently informed Richardson and Taylor that she had complied with his
9 order to destroy the smears, the lab results and the sensor data.⁵⁰

10 Andrews says that thereafter the fence was stored outside an RCA for approximately a
11 month, after which it was gone. Senior HP Bob Evans told Andrews he had gotten the fence
12 released so it could be returned to the rental company. When she questioned how that happened,
13 he replied, "I didn't scan where you did, dummy."⁵¹

14 **3. Fraudulent Building Surveys**

15 The contract between the Navy and Tetra Tech required the company to perform static
16 scans and smears of buildings to determine if they were contaminated with radioactivity beyond
17 free release levels. When a building was found to have elevated levels of radioactivity, Tetra Tech
18 was contracted to engage in remediation to remove the radioactive contamination and bring
19 contaminant levels below release levels. After remediation, Tetra Tech was required to again scan
20 and take smears of the building to determine if all radioactive readings were within acceptable
21 levels. Tetra Tech ordered the post-remediation building scans be done fraudulently to obtain free
22 release.

26 ⁴⁹ *Id.* at ¶ 33.

27 ⁵⁰ *Id.* at ¶ 34.

28 ⁵¹ *Id.* at ¶ 35.

1 Tetra Tech supervisors divided building areas into three classes, Class 1, 2 and 3.⁵² They
2 classified the floors and lowest two meters (or approximately 6 feet) of the walls to be Class 1.
3 The proper way to conduct a Class 1 survey was to slowly scan the “probable sites” of
4 contamination, such as drains where radioactive liquids might have been poured, and to scan each
5 surface (i.e., the floor and lower walls) using a Ludlum 2350 scanner (which measures gamma
6 radiation) in a systematic grid. In addition, smear samples were to be taken from area surfaces
7 which the scans identified as highest in radioactivity.

8 For Class 2, HPs were supposed to take static scan and smear samples in a systematic grid
9 from the higher sections of the walls, above 2 meters. Class 3 areas were considered the ceiling
10 and roof. Scans and smears were to be taken of these areas, but without requiring the strict grid
11 patterns of a Class 1 or 2.

12 Proper building survey procedure was not followed.

13 Anthony Smith was assigned to perform a large number of building surveys. Sometime
14 between the summer of 2010 and early 2011, he was assigned to do building surveys in Building
15 707, buildings and building footprints throughout the 500 series and Buildings 351, 351A, 411,
16 401, 414, 406, 144, 146, 130, 103, 113, and 521. Smith’s Tetra Tech HP supervisor, Steve Rolfe,
17 told his survey team, consisting of Jeff Rolfe, Rick Zahensky and Smith, not to worry about doing
18 Class 2 or 3 scans and smears at all. Rather, they were instructed to “just get some numbers and
19 get it done,” or “just set your meter down on the ground and let it count,” meaning they should
20 allow the scanner to operate in order to obtain data, but that the scanner should be stationary
21 rather than doing a systematic survey of the area as required. Smith and his co-workers followed
22 instructions, did not do proper Class 2 and 3 scans, and reported fraudulent data for the Class 2
23 and Class 3 scans for nearly all buildings at Hunters Point.⁵³

25 ⁵² See Exhibit 14, *Declaration of Albert Bowers*, at ¶ 75. The contract between the Navy and Tetra Tech
26 defined Class 1, 2, and 3 differently than the way Tetra Tech supervisors in the field used the terms. Under
27 the contract, Class 1, 2, and 3 were defined in large part based on information as to whether the area was
28 known to be contaminated with radioactivity, suspected to be contaminated, or not believe to have
contamination above free release levels, respectively.

⁵³ Exhibit 7 at ¶ 25.

1 When Smith challenged this practice, HP supervisor Steve Rolfe told him, “That’s what
2 Bill Dougherty [Tetra Tech’s Project Manager] wants.” The false scanning was also done on
3 other buildings by HP Supervisor Justin Hubbard’s team, including Buildings 103, 114, 145, 130,
4 439, 366, and 813.

5 **4. Fraudulent Data Reporting**

6 The contract between the Navy and Tetra Tech required the company to do scans for
7 radioactive contaminants of buildings, developed areas, and areas of open soil.

8 Tetra Tech directed that scan data that were too high be altered, precluding having to do
9 additional expensive remediation, or too low, which would raise questions about the scan
10 integrity and potentially require that the scanning be entirely redone.

11 Anthony Smith personally witnessed HP Tina Rolfe changing scan results so that they
12 would fall within acceptable limits, that is, not too high but not too low to raise suspicions. One
13 time when Smith was downloading data from his equipment onto a computer, he came up behind
14 Tina Rolfe and saw her working on a computer changing readouts from a Ludlum 2350. Smith
15 estimates that the HPs downloaded thousands of scan results per day. He states that changing
16 these scan numbers was a very simple thing to do. He also saw her changing numbers on readings
17 from a Ludlum 2360 (which collects surveillance data for alpha and beta radiation). The fact that
18 Tetra Tech was “changing the numbers” was common knowledge among the HPs. Both HPs Ray
19 Roberson and Joe Cunningham told Smith they were aware that scan results were being altered.⁵⁴

20 Smith observed that Tina Rolfe was directed to change the numbers by her husband, Steve
21 Rolfe, a Tetra Tech HP supervisor. Several times he heard Steve Rolfe say of one sample or
22 another, “that number’s too high, it’s way above background,” and he directed that it be altered to
23 be lower to be closer to the background levels.⁵⁵ HP supervisor Justin Hubbard was also aware of
24 the alterations. Smith complained about the scan results being changed, and Hubbard told him
25 that Tetra Tech was doing it everywhere else on the Shipyard.⁵⁶

26 ⁵⁴ *Id.* at ¶ 26.

27 ⁵⁵ *Id.*

28 ⁵⁶ *Id.* at ¶ 27.

1 Smith reports that Senior HP Rick Zahensky told him he also changed scan result numbers
2 for an extended period, involving many months, if not years. On numerous occasions Zahensky
3 took a computer home in order to change scan results overnight. Zahensky told Smith that at
4 times he worked until the early hours of the morning to “get the numbers right.” Smith was
5 present on several occasions when Zahensky did not “get the numbers right,” and was “chewed
6 out” by Steve Rolfe. Smith also witnessed Tina Rolfe being “chewed out” by her husband Steve,
7 when numbers remained too high or too low.⁵⁷

8 Tetra Tech also violated proper protocol by holding up the delivery of the scan results to
9 the project management office. Proper procedure was that scan results were to be submitted to the
10 office by the end of each day on thumb drives. However, rather than submit them by day’s end,
11 the scan results were held up so that employees like Zahensky could manipulate results that were
12 deemed too high or too low. When Zahensky was given the scan results to take home in the
13 evening, the thumb drive was not submitted until the following day at the earliest. The office had
14 no objection to the tardy delivery of the scan results, since their fraudulent manipulation was done
15 at the direction and insistence of Tetra Tech’s upper-level onsite project management.⁵⁸

16 Bert Bowers, the former RSOR, states that a lab technician, Neil Berrett, and a lab
17 supervisor, Phil Smith, came to him on separate occasions complaining they were being asked by
18 upper level project management to “write away” laboratory analysis results, that is, change the
19 results of sample analyses and scans. Bowers directed the employees to go back to the project
20 management, talk with them, and come back to Bowers if they were not satisfied. At that time,
21 Bowers had not been aware project management had been ordering the falsification of samples
22 and scan results.⁵⁹

23 **5. Potentially Hazardous Radioactive Soil Shipped Offsite and Backfilled at the** 24 **Shipyard**

25 In the years preceding the Shipyard cleanup, Navy studies established that many of the

26 ⁵⁷ *Id.* at ¶ 26.

27 ⁵⁸ *Id.*

28 ⁵⁹ Exhibit 14 at ¶ 53.

1 drain and sewer lines throughout the base were contaminated as a result of the Navy having
2 previously disposed of radioactive waste by simply dumping it down the drain. Investigation also
3 found that many of the drain and sewer lines had severely broken or cracked over the years,
4 causing radioactive contamination to leach into the surrounding soil. Remediating the extensive
5 radioactive contamination stemming from drain and sewer lines was thus a major component of
6 Tetra Tech's cleanup responsibilities at the Shipyard, and included large-scale soil excavation and
7 sewer and drain line removal.

8 Soil removed from around the sewer lines was required to be scanned and remediated as
9 necessary. Soil that remained contaminated with radiation was to be disposed of as low-level
10 radioactive waste. Soil that was deemed successfully remediated was either backfilled into
11 trenches at the Shipyard or shipped offsite to be used for commercial purposes.⁶⁰

12 From the very beginning of the sewer trench remediation, however, potentially radioactive
13 soil was allowed to be shipped offsite that Tetra Tech claimed was free of radioactive materials
14 when it may not have been. Tetra Tech management engaged in deliberate fraudulent practices to
15 conceal the potentially radioactive nature of soil cleared for use as backfill. To date, Tetra Tech
16 has failed to alert the public of the potentially hazardous nature of soil that left the Shipyard or
17 acknowledge that potentially radioactive soil was backfilled throughout the Shipyard.

18 **a. Potentially Hazardous Radioactive Soil Shipped Offsite**

19 In late 2005, soon after Tetra Tech began remediating soil that had been removed from
20 trenching in connection with drain and sewer line removal and remediation of areas within Parcel
21 E, Tetra Tech established a conveyor belt system at the Shipyard to screen soil for radioactive
22 material above release levels.⁶¹ Under this system the soil was first spread no more than 6 inches
23 deep on a conveyor belt. The soil was then to be moved at an established slow speed under
24 radiological sensors that would set off an alarm if the sensors picked up excessive radioactivity. If
25 the alarms sounded, the soil within a specified number of feet on either side of the sensors was to
26 be removed from the conveyor belt and placed in low level radioactive containers for offsite

27 ⁶⁰ *Id.* at ¶ 43; Exhibit 7 at ¶ 28.

28 ⁶¹ Exhibit 14 at ¶ 20.

1 disposal. The soil that did not set off the radiological sensor alarms was permitted unrestricted
2 radiological release from Hunters Point.⁶²

3 Sometime in early 2006, RSOR Bert Bowers contacted Ulrika Messer, a Tetra Tech
4 manager in San Diego who was responsible for the conveyor belt system and the specific
5 contracts under which the conveyor belt processing was being undertaken. Bowers informed
6 Messer that New World Environmental (“NWE”) had reached 80% of the budgeted costs Tetra
7 Tech had allotted for the conveyor belt processing of radioactively contaminated soil. Messer
8 reacted very strongly, screaming at Bowers and saying she would have to go to Tetra Tech VP
9 Neil Hart to “beg” for more money for the conveyor belt processing of the remaining soil.⁶³

10 After Bowers alerted Tetra Tech to the budgeted funds running low, Tetra Tech
11 Construction Superintendent Joe Levell, who reported to Messer, substantially increased the
12 conveyor belt speed. Increasing the speed made the radiation detectors much less able to detect
13 radiological contamination. Tetra Tech’s internal memos admit that the speeds were increased to
14 double the approved speed. However, HPs who worked on the conveyor belt system report that
15 the speeds were actually increased by a factor of 6 to 9 times the authorized conveyor belt
16 speed.⁶⁴ Bowers estimates that the high scanning speed would make the radiation detectors nearly
17 worthless, unable to detect all but extreme radiation emissions.⁶⁵

18 In that same 2006 timeframe, further efforts to cripple the effectiveness of the conveyor
19 belt system were taken. Messer communicated regularly with NWE CEO Mike Wilson. The
20 brother of Mike Wilson, Gary, was a senior HP working at the Shipyard for NWE. Sometime
21 shortly after Bowers informed Messer that the budget for operating the conveyor belt systems was
22 nearly maxed out, Gary Wilson, with the assistance of HP Jane Taylor, silenced the sensor alarms
23 so the sensor system would never alert that excessive radioactive contamination was present in
24 the soil.⁶⁶

25 ⁶² *Id.* at ¶¶ 17-18.

26 ⁶³ *Id.* at ¶ 20.

27 ⁶⁴ *Id.* at ¶¶ 17, 21-23; Exhibit 15 at ¶ 29; Exhibit 10, *Declaration of Robert McLean*, at 8-11.

28 ⁶⁵ Exhibit 14 at ¶ 22.

⁶⁶ Exhibit 7 at ¶ 29; Exhibit 14 at ¶ 23.

1 When Gary Wilson was questioned about why he and Jane Taylor deactivated the sensor
2 alarms, he stated that they were silenced because they were going off so much that a large amount
3 of the soil was found to be radiologically contaminated and Tetra Tech wanted less soil deemed
4 contaminated. Wilson said the alarms were silenced due to pressure from Tetra Tech
5 management.⁶⁷ After months of improperly setting conveyor belt speed and deactivating the
6 alarm, HPs raised objections to Tetra Tech, ultimately forcing it to stop the improper conveyor
7 belt use in July 2006.

8 In the months prior to July 2006, before the use of the conveyor belt system was stopped,
9 tens of thousands of cubic yards of soil were fraudulently “cleared” as radiologically
10 decontaminated due to the excessive conveyor belt speed and disabling the alarm. Tens of
11 thousands of cubic yards of soil fraudulently “cleared” were shipped offsite for use by unknowing
12 customers before July of 2006.

13 Tetra Tech management, including Tetra Tech Vice President Neil Hart, was aware that
14 tens of thousands of cubic yards of potentially contaminated soil containing levels of radioactivity
15 above release levels had been improperly screened by the conveyor belt system. VP Hart and
16 others in Tetra Tech management also knew that Tetra Tech could not represent that the soil was
17 free of hazardous radioactivity. Despite this knowledge, Tetra Tech took no steps to inform the
18 recipients of the soil that it was potentially hazardous. Moreover, Tetra Tech took no steps to
19 inform appropriate regulatory agencies.⁶⁸ Tetra Tech’s failure to warn the public and regulatory
20 agencies of the risk it created is a breach of the trust the California Department of Public Health
21 Radiological Health Branch placed in the company by issuing it a license.

22 **b. Potentially Hazardous Radioactive Soil Used As Backfill**

23 After the conveyor belt system was exposed as having been misused and ineffective, Tetra
24 Tech implemented an alternative soil scanning system using Radiological Screening Yard
25 (“RSY”) pads. In the RSY pad system, soil excavated from trenches was spread out in an
26 approximately 6-inch layer across a pad roughly the size of a football field and scanned for

27 ⁶⁷ Exhibit 14 at ¶ 23; Exhibit 7 at ¶ 30.

28 ⁶⁸ *Id.*

1 radioactivity above release levels. At first, HPs walked the pad hand scanning for radioactivity
2 and they would remove soil registering above release levels.

3 Later, as the process of having HPs walk and scan the RSY pads proved to be time
4 consuming and expensive, Tetra Tech switched to using an array of radioactive sensors pulled
5 behind a small tractor, known in the field as a “towed array.” With the towed array system, the
6 information gathered by sensors, including GPS data, was transmitted to a data center computer.
7 A data specialist would then develop a detailed map of the areas of soil on the pad marking the
8 highest radioactive readings. The map was then transmitted to an HP who would direct other HPs
9 to the high-level spots to remove the radioactive soil.⁶⁹

10 The RSY pad system was central to determining if soil removed from the trenches was to
11 be disposed of as radioactive waste or could be used as backfill at the Shipyard.⁷⁰ In its early
12 stages, 2008 and early 2009, the towed array appears to have been used properly and experienced
13 and qualified HPs led the process. The towed array procedure for the RSY pads also proved much
14 more effective compared to having the HPs hand-scan the soil. Still, RSY pad processing was
15 expensive and time consuming for Tetra Tech, and the fixed price contracts provided an incentive
16 for work to be performed quickly and fraudulently at minimal cost.

17 **c. Unqualified Supervisors and Untrained Workers Responsible for RSY**
18 **Pad Soil Processing**

19 Beginning in 2009, Tetra Tech undertook conduct aimed at cutting the cost of the RSY
20 pad soil processing and in turn severely undermined the credibility of RSY remediation work.
21 Most notably, Tetra Tech installed unqualified workers in positions of responsibility at the RSY
22 pads, some of whom had no experience in the radiological industry.

23 For example, Jane Taylor was hired as a Junior HP in 2006 despite suspicion her resume
24 was fraudulent. Jane Taylor’s daughter, Samantha Taylor, was a Junior HP at the Shipyard. The
25 mother wanted the daughter’s help in getting a job at the Shipyard. According to Senior HP
26 Arthur Jahr, Samantha Taylor asked him to lie on her mother’s behalf, asking Jahr to falsely state

27 ⁶⁹ Exhibit 14 at ¶ 37.

28 ⁷⁰ *Id.* at ¶ 43.

1 he had previously worked with the mother in the radiological field. Jahr refused.⁷¹ Furthermore,
2 according to Senior HP Richard Stoney, the daughter told him that her mother had no radiological
3 experience.

4 In applying for a job through New World Environmental, the mother, Jane Taylor,
5 submitted a resume that claimed she had years of radiological experience working for a firm
6 called "Taylor Made Construction." However, RSOR Bert Bowers was familiar with firms that
7 did radiological work, had never heard of "Taylor Made," and came to the conclusion that the
8 resume was fraudulent. Bowers shared this suspicion with Kari Guidry, NWE's Human
9 Resources Director. Subsequently Jane Taylor submitted a second resume that omitted any
10 reference to "Taylor Made Construction" and the claim she had prior radiological experience.

11 Despite the red flags raised about her resume, Taylor was hired as a Junior HP and, within
12 just a few months, promoted to Senior HP even though it normally took Junior HPs at least
13 several years to gain the experience necessary to be a Senior HP.

14 Other HPs who observed Taylor's work saw that she was not competent to be an HP at all,
15 let alone a Senior HP.

16 Subsequently, Jane Taylor left the Shipyard to work elsewhere. However, she was rehired
17 a short time later. At the insistence of Construction Superintendent Dennis McWade, with whom
18 Taylor had a romantic relationship (and later married), Taylor was re-hired as a Senior HP.⁷²

19 Sometime in 2009, Taylor was put in charge of the RSY pad radiological remediation.⁷³

20 In early 2009, Tetra Tech hired Thorpe Q. Miller to oversee the data system used for the
21 RSY pad processing, including the development of the maps used for the remediation of soil on
22 the RSY pads. Miller did not have the education, training, or experience required by the Navy
23 contracts to hold this position.⁷⁴

24 However, Miller is the son of Laurie Lowman, the Lead Environmental Protection

25 ⁷¹ See Exhibit 16, *Declaration of Arthur Jahr, III*, ¶¶ 10-11. See also Exhibit 13 at ¶¶ 18-25 Exhibit 17,
26 *Declaration of Richard Stoney*, ¶¶ 5-9; Exhibit 14 at ¶¶ 29-36.

27 ⁷² Exhibit 14 at ¶¶ 33-34.

28 ⁷³ *Id.* at ¶ 36.

⁷⁴ *Id.* at ¶ 37.

1 Manager at RASO, who was responsible for Navy oversight of remediation at Hunters Point and
2 Tetra Tech's role in it. Tetra Tech employed him apparently as a favor to Lowman and to curry
3 favor with her. Miller was originally a Tetra Tech employee, but its management arranged to have
4 him employed by a subcontractor, though his job was exactly the same, in an attempt to avoid the
5 appearance of a conflict of interest.⁷⁵

6 With Miller and Taylor in charge of the RSY pad processing, Tetra Tech ceased using
7 qualified HPs to perform soil sampling and removal on the pads. Tetra Tech instead had unskilled
8 laborers assist Taylor at the RSYs. According to accounts of former HPs, trained and skilled
9 Senior HPs were not regularly assigned to RSY pad processing from 2010 on.⁷⁶

10 The use of unskilled laborers for the RSY pad processing under the supervision of Taylor
11 put the health and safety of the laborers at risk. The laborers were not sufficiently trained to
12 understand the health risks of inhaling or ingesting the radioactively contaminated material they
13 were working with, and Taylor lacked the competence to ensure the laborers performed the work
14 properly and safely. Senior HP Art Jahr observed laborers working the RSY pads with Taylor
15 without proper protective equipment, such as gloves and respiratory protection. Jahr also
16 observed the laborers creating unnecessary dust and misusing the Ludlum sensors by swinging
17 them too high and too fast over the ground, rendering the instruments ineffective. In August of
18 2010, Jahr brought his concerns over the laborers' conduct and the lack of proper supervision by
19 Taylor to a Tetra Tech supervisor, Brian White. Jahr told White that if NRC inspectors saw the
20 conduct Taylor was supervising, the NRC would shut down the Shipyard project. Jahr was
21 terminated shortly thereafter.⁷⁷

22 Other Senior HPs also observed the conduct of Taylor in her supervision of the RSYs. For
23 example, in processing the soil on RSY pads, soil samples were to be taken from the 32 highest
24 radioactive reading spots that the towed array identified and Miller mapped. On one occasion,
25 Senior HP Archie Jackson overheard laborers tell Taylor they had collected less than the

26 ⁷⁵ *Id.* at ¶¶ 38-40.

27 ⁷⁶ *Id.* at ¶ 36, Exhibit 13 at ¶¶ 13, 18, Exhibit 18, *Declaration of Archie Jackson*, ¶¶ 10-12.

28 ⁷⁷ Exhibit 16 at ¶ 18.

1 necessary 32 samples from a pad. Jackson then overheard Taylor direct the laborers to “just get
2 the soil from anywhere,” that is, it did not matter if the soil samples came from the proper RSY
3 pad.⁷⁸ The direction given by Taylor was in clear violation of procedures and resulted in the
4 fraudulent submission of soil samples from the wrong location. It also calls into the question the
5 legitimacy of the RSY remediation process.

6 **d. Backfilling with Potentially Hazardous Radioactive Soil**

7 Taylor and Miller were responsible for selecting the locations from which soil samples
8 were taken at RSY pads. The Navy’s protocol required that the soil samples be taken from the
9 locations on the pad with the highest radioactivity readings.⁷⁹

10 Some soil processed at the RSYs and determined to be free from contamination was used
11 as backfill. Other soil cleared from the RSY pads as no longer containing high levels of
12 radioactive contamination was to be shipped offsite, going through the Portal Monitor for a final
13 check.⁸⁰

14 Miller and Taylor saw to it that the large majority of soil excavated from the sewer
15 trenches was not treated as radioactively-contaminated soil. For example, parcel referred to as
16 “UC-3 Work Area #16” had 1,023 cubic yards of potentially contaminated soil removed. After
17 processing, only 10 cubic yards of soil, or less than .01% of the soil removed, were remediated.⁸¹
18 Through intentional fraud or incompetence, taking samples that avoided the existing high
19 radioactivity in the RSY pad soil improperly permitted the tests to meet the Navy standards and
20 obtain clearance for the RSY pad soil to be used as backfill at the Shipyard.⁸²

21 Tetra Tech knew that, in 2010 and the first 9 months of 2011, the RSY pad processing
22 under the supervision of Miller and Taylor resulted in dramatically more Portal Monitor failures,
23 even though the soil should have been “clean” by the time it reached the Portal Monitors. Tetra
24

25 ⁷⁸ Exhibit 18 at ¶¶ 15-17.

26 ⁷⁹ Exhibit 14 at ¶ 37, Exhibit 13 at ¶¶ 41-42.

27 ⁸⁰ Exhibit 14 at ¶ 43.

28 ⁸¹ *Id.* at ¶¶ 44; Exhibit 19, *Jan. 6, 2011, Email re: Backfill Trenches Unit 187*; Exhibit 20, *Jan. 6, 2011, Email re: Backfill Trenches Unit 190*.

⁸² Exhibit 13 at ¶¶ 44-45.

1 Tech also knew that the soil cleared to be used as backfill at the Shipyard never went through the
2 Portal Monitor screening process.⁸³ Despite the fact that the soil leading to increased Portal
3 Monitor alarms had been processed by the same individuals as the soil cleared for backfill, Tetra
4 Tech never took any steps to verify that the soil that was to be used as backfill at the Shipyard did
5 not contain the same type of residual radiological contamination that led to increased Portal
6 Monitor failures.

7 **6. Change in the Portal Monitor Process**

8 When the Portal Monitor process was first instituted, the Navy required loaded trucks to
9 pass through the Portal Monitor to detect whether hazardous radioactive contamination existed in
10 the truckload. If a truckload set off the Portal Monitor alarm, the truck was to go through the
11 Portal Monitor two more times. If the truck failed two out of three passes, then the load was not to
12 go offsite. Rather, HPs were to scan the load in an effort to locate the radioactive material and the
13 load was required to be taken back to the RSY pads to be reprocessed.⁸⁴

14 By 2011, trucks loaded with RSY-processed soil were frequently failing the Portal
15 Monitor screening. According to Senior HP Susan Andrews, and as entered into her logs, nearly
16 all of the 37 loaded trucks she screened one day in the first half of 2011 set off the Portal Monitor
17 alarm, requiring all loads to be returned to the RSY pad to be re-worked. The time and expense to
18 Tetra Tech associated with the Portal Monitor failures was significant as loads needed to be
19 reprocessed entirely.⁸⁵

20 In early September 2011, Tetra Tech responded to the increased Portal Monitor failures by
21 making two fundamental changes. First, Tetra Tech substantially decreased the sensitivity of the
22 Portal Monitor from “sigma 3 plus mean background level” to “sigma 8 plus mean background
23 level.”⁸⁶ This means in plain language that the sensor sensitivity was decreased by nearly two-
24 thirds. Radioactivity that should have set off the alarm no longer set it off. This change crippled
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26 ⁸³ *Id.* at ¶¶ 42-44.

27 ⁸⁴ *Id.* at ¶ 46.

28 ⁸⁵ *Id.* at ¶¶ 8, 45.

⁸⁶ *Id.* at ¶ 46.

1 the Portal Monitor's effectiveness in catching excessive radioactivity.

2 Second, Tetra Tech weakened the procedure for scanning trucks after radioactivity set off
3 the Portal Monitor alarm. Before the September 2011 changes, a truckload that set off the alarm
4 on two out of three passes had to have the load returned to the RSY pads to be reworked. After
5 the change in procedure, Tetra Tech instituted a hand-scanning process that virtually ensured
6 hazardous levels of radioactivity would not be found, allowing the truckload to be released and
7 leave the Shipyard.

8 Tetra Tech had learned from years of experience with the Portal Monitor that HPs usually
9 located the radioactive materials that set off the alarm when they scanned the soil by climbing a
10 scaffold and scanning over the top of the trailer. Tetra Tech also knew from prior years that very
11 few scans through the body of the trailer were able to detect radioactive materials due to shielding
12 by the metal trailer body and the thickness of the soil in the trailer.⁸⁷

13 In September 2011, Tetra Tech forbade the HPs to use the scaffolding and required that
14 the scanning be done solely through the metal shell of the trailer. This change also allowed a load
15 that failed the newly weakened Portal Monitor to leave the Shipyard without having to be sent
16 back to the RSY pads to be reworked.⁸⁸ The Portal Monitor became largely irrelevant because
17 loads that failed the Portal Monitor were allowed to leave the Shipyard as non-radioactive based
18 on a corrupt scanning procedure.⁸⁹

19 As a result of the changes Tetra Tech made to the Portal Monitor, potentially hazardous
20 radioactive materials were regularly permitted to leave the Shipyard designated as free of
21 hazardous radioactivity. Tetra Tech was able to dramatically reduce the costs it incurred for the
22 soil processing. The September 2011 changes increased profits at the expense of those who
23 unknowingly received potentially hazardous radioactive soil from the Shipyard.⁹⁰

24 Tetra Tech's practice of putting incompetent individuals in charge of the critical RSY
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26 ⁸⁷ *Id.* at ¶ 48.

27 ⁸⁸ *Id.* at ¶¶ 49-50.

28 ⁸⁹ *Id.* at ¶ 50.

⁹⁰ *Id.* at ¶ 49.

1 screening process, removing competent HPs from the process, reducing the sensitivity of the
2 Portal Monitor, and barring HPs from scanning truckloads from overhead scaffolding increased
3 the likelihood that radioactive soil above the cleanup standard was shipped offsite. To date, Tetra
4 Tech has not alerted the entities that received soil from the Shipyard after September 2011 that
5 the soil may contain elevated radioactivity at levels potentially hazardous to health.

6 **C. Data Review**

7 On the same day Greenaction filed the NRC petition with the whistleblower declarations
8 attesting to the fraud, it also submitted copies of the petition to the Navy, US EPA, and state
9 agencies. On multiple occasions, Greenaction expressed community concerns about the Shipyard
10 cleanup to the Navy and regulators and asked them to conduct a true investigation of the fraud by
11 hiring competent investigators to locate and interview all of the former radiation workers at the
12 Shipyard. The Navy refused. Instead, the Navy conducted a third-party review of Tetra Tech's
13 data: "In response to the concerns, the Navy assembled a Technical Team (a group of technical
14 experts) to conduct an evaluation of the previous data in light of the claims made.... The
15 objective of this evaluation is to review the historical radiological data collected by TtEC at
16 HPNS, assess the potential for data falsification or manipulation, and recommend follow-up data
17 collection to validate previous decisions regarding the property condition."⁹¹

18 The data review was "[b]ased solely on a review of the data previously collected by
19 TtEC,"⁹¹ consisting of the results of soil samples and building scans.

20 The review found substantial evidence of extensive potential fraud and/or data
21 manipulation in soil samples from every parcel it researched. It also found evidence of falsified
22 building scans - just as the whistleblowers' declarations attest.

23 **1. Summary of Results of Data Review of Soil Samples**

24 **a. Parcel B**

25 The data review results for Parcels B and G were reported in a single draft report; the
26 results for Parcels C and E were subsequently reported separately. The data review for Parcels B

27 ⁹¹ Exhibit 21, *Draft Radiological Data Evaluation Findings Report for Parcels B and G Soil*, September
28 2017, p. ii.

1 and G found significant evidence of fraud, citing 30 different sampling units that evidenced fraud.
2 Significantly, the data review found fraud that was much more widespread than what Tetra Tech
3 and the Navy acknowledged – and even more than the whistleblowers swore to: 29 of the 30
4 fraud-exhibiting sample units were not included in any of the allegations made by former
5 employees.⁹²

6 “The areas evaluated [in the data review] in Parcel B included 70 trench units, 110 fill
7 units and 5 current and former building sites with 17 survey units.”⁹³

8 The review found:

- 9 1. 4 of the 70 trench units evidenced potential data fabrication or manipulation (5.7%);
- 10 2. 19 of the 110 fill units evidenced potential fraud (17.3%);
- 11 3. 2 of the 5 current and former building sites evidenced potential fraud (40%).⁹⁴

12 **b. Parcel G**

13 The Parcel G review found:

- 14 1. 20 of the 63 trench units evidenced potential data fabrication or manipulation
15 (31.7%);
- 16 2. 54 of the 107 fill units exhibited evidence of potential fraud (50.4%);
- 17 3. Both of the current and former building sites evidenced potential fraud (100%).⁹⁵

18 **c. Parcel C**

19 The Parcel C report found:

- 20 1. 46% of the trench units (32 of 69) evidenced potential data manipulation or
21 falsification.⁹⁶
- 22 2. 78% of the fill units (94 of 120) evidenced potential fraud.⁹⁷

24 ⁹² *Id.*

25 ⁹³ *Id.*

26 ⁹⁴ *Id.* p. vi.

26 ⁹⁵ *Id.*

27 ⁹⁶ Exhibit 22, *Draft Radiological Data Evaluation Findings Report for Parcel C Soil*, November 2017, p.
4-2.

28 ⁹⁷ *Id.*, p. 4-20.

3. 73% of the survey units (8 of 11) evidenced potential fraud.⁹⁸

d. Parcel E

The Parcel E review found:

1. 46% of the trench units (26 of 57) evidenced potential data manipulation or falsification.⁹⁹
2. 67% of the fill units (64 of 96), there was evidence of potential data manipulation or falsification.¹⁰⁰
3. 60% of survey units (61 of 102) in 14 buildings evidenced potential data manipulation or falsification.¹⁰¹

2. Summary of Building Scan Findings

The data review included an evaluation of Tetra Tech’s building radiation surveys at the Shipyard from 2008 to 2016. The Navy used four statistical methods for the evaluation: the “Scan Speed and Coverage,” “Data Distribution Comparison,” “Data Duplication Query” and “Sum of Statics Assessment” methods. The report states, “While the Navy selected four methods for the initial survey evaluation, additional inconsistencies and anomalies were noted but not investigated fully because the initial evaluation provided **ample evidence that the building radiation surveys had been manipulated** and could not be used to support a recommendation for unrestricted radiological release.”¹⁰² (Emphasis added.)

Three of the four methods evidenced potential fraud; the fourth, the “Data Distribution Comparison,” was inconclusive. Overall, the data evaluation “determined that former worker allegations describing improper data collection and manipulation could be verified by developing and applying analytical methods on the TtEC -provided data and TtEC-submitted survey reports.”

⁹⁸ *Id.*

⁹⁹ Exhibit 23, *Draft Radiological Data Evaluation Findings Report for Parcel E Soil*, December 2017, p. iii.

¹⁰⁰ *Id.*

¹⁰¹ *Id.* p. iv.

¹⁰² Exhibit 24, *Building Radiation Survey Data Initial Investigation Report*, March 2018, p. iii.

1 Its Executive Summary is blunt: “**Evidence of data manipulation and/or falsification was**
2 **found in the building radiation surveys.**”¹⁰³ (Emphasis added.)

3 The “Scan Speed and Coverage Method” tested whistleblowers’ allegations by comparing
4 the scanned area with the time expended, using “Building 113, Survey Unit 3 floors” to illustrate.
5 Although 100 percent of the floor was supposed to be scanned at the proper speed, that could not
6 have been the case: “From these results, if the entire floor area was scanned (100 percent
7 coverage) during the scan duration, then the detector must have been moving an average of 2.85
8 cm/s [centimeters per second], which is **more than twice the design scan rate,**” and “if the floor
9 was scanned at 1.37 cm/s [the proper scan rate], then the data points recorded during the scan
10 duration provide a maximum of 48 percent scan coverage, which is **less than half the design**
11 **scan coverage.**”¹⁰⁴ (Emphasis added.)

12 The “Data Duplication Query Method” found inappropriate strings of duplicated data
13 which could indicate manipulation: “Forty instances of repeated strings of alpha, beta, or gamma
14 cpm [counts per minute] data were identified in the electronic data and confirmed in the survey
15 reports submitted by TtEC.”¹⁰⁵

16 The “Data Duplication Query” test did indeed find evidence of improper data duplication.
17 In “Building 130, survey Unit 5,” for example, “the same four values have been repeated five
18 different times and reported as 20 different ABST [alpha-beta static] readings.”¹⁰⁶

19 The report sums up, “It is concluded that some surveys have been falsified and additional
20 data will need to be collected to support a recommendation for unrestricted radiological release at
21 HPNS radiologically-impacted buildings.”¹⁰⁷

22 **3. Summary of Regulators’ Comments on Parcels B and G Soil Samples**

23 By cover letter of December 27, 2017, the US EPA, DTSC and CDPH transmitted their
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25 ¹⁰³ *Id.*

26 ¹⁰⁴ *Id.* p. 4-3.

27 ¹⁰⁵ *Id.* p. 6-2.

28 ¹⁰⁶ *Id.* p. 6-9.

¹⁰⁷ *Id.*

1 formal comments stating concerns about the draft soil-sampling report for Parcels B and G.¹⁰⁸

2 The cover letter serves functionally as an executive summary. It states that the regulators
3 conducted a detailed, independent review of the Parcels B and G soil-sample report “with a
4 technical team including national experts in health physics, geology, and statistics.”

5 The regulators found astonishing rates of potential fraud or data manipulation and called
6 for resampling a much larger percentage of soil samples than the Navy intended to: “In Parcel B,
7 **the Navy recommended resampling in 15% of soil survey units** in trenches, fill and building
8 sites. US EPA, DTSC, and CDPH found signs of potential falsification, data manipulation, and/or
9 data quality concerns that call into question the reliability of soil data in an additional 76% of
10 survey units, **bringing to 90% the total suspect soil survey units in Parcel B.**” (Emphasis
11 added.)¹⁰⁹

12 The cover letter also stated: “In Parcel G, the Navy recommended resampling 49% of
13 survey units, and **regulatory agencies recommended 49% more, for a total of 97% of survey**
14 **units as suspect.**” (Emphasis added.)

15 Speaking of Parcel G, the US EPA and state agencies reached a devastating judgment:
16 “The data revealed not only potential **purposeful falsification and fraud** in terms of sample
17 and/or data manipulation, they also reveal the potential **failure to conduct adequate scans**, a
18 **lack of proper chain of custody** for ensuring samples were not tampered with, *extensive data*
19 *control issues* (including off-site laboratory data) and **general mis-management of the entire**
20 **characterization and cleanup project.** (Emphasis added.)¹¹⁰

21 “In summary,” the cover letter concludes, “the data analyzed demonstrate a **widespread**
22 **pattern of practices that appear to show deliberate falsification**, failure to perform the work in
23 a manner required to insure the ROD [Record of Decision] requirements were met, or both.”
24 (Emphasis added.)¹¹¹

26 ¹⁰⁸ Exhibit 25, Cover letter to EPA/DTSC/CDPH comments, p. 1

27 ¹⁰⁹ *Id.*

28 ¹¹⁰ *Id.*

¹¹¹ *Id.*

1 The *Declaration of Steven J. Castleman*, incorporated herein as Exhibit 8, describes a
2 January 12, 2018 conversation Greenaction’s counsel had with Dr. Kathryn A. Higley, the Navy’s
3 Community Technical Liaison for the radiation cleanup of the Shipyard. Dr. Higley stated that the
4 Navy concluded that the data provided by Tetra Tech was “to a large extent useless.” Dr. Higley
5 also stated that there needed to be substantial resampling and rescanning to determine the full
6 impact of the fraudulent clean up. This was confirmed publicly by Derek Robinson of the Base
7 Realignment and Closure Program Management Office West, the Navy’s environmental cleanup
8 manager, at a Community Open House meeting held January 31, 2018. He also said the Navy
9 intended to redo all of Tetra Tech’s work, and the planning process for re-sampling had begun.¹¹²

10 **D. Tetra Tech’s Motive to Commit Fraud and Culture of Fraud**

11 Tetra Tech put its production schedule and profits ahead of proper radiological sampling
12 and remediation. As early as 2006, it demonstrated it was willing to cut corners, taking steps to
13 fraudulently disable its scanning system for detecting elevated levels of radioactivity in soil,
14 resulting in potentially contaminated soil being shipped offsite.

15 Starting in 2009 and continuing thereafter, the agreements between the Navy and Tetra
16 Tech changed from cost-plus contracts to firm fixed-price contracts,¹¹³ which significantly
17 intensified Tetra Tech’s fraudulent practices. After this change, Tetra Tech faked both
18 radiological investigation and remediation; unlike previously, cutting costs led directly to
19 increased profits.

20 Furthermore, under the fixed-price contracts, the bulk of the payments to Tetra Tech – and
21 bonuses for its management – depended on obtaining free release of materials, soil, areas and
22 buildings. Tetra Tech was to be paid in incremental stages on each contract covering specific
23 areas but was not to be paid the largest share of the contract – 40% – until all hazardous
24 radioactive materials were removed and post-remediation sampling indicated radioactivity fell
25 below cleanup levels established under the contract. This substantial final payment motivated the
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27 ¹¹² Exhibit 2 at 2.

28 ¹¹³ See Exhibit 14 at ¶ 11; Exhibit 14, Attachment 1, *June 24, 2011 Scope of Work Contract*.

1 fraud, encouraging Tetra Tech to falsely claim remediation was successfully completed when it
2 was not.

3 Tetra Tech found that certain areas of the Shipyard, like the Building 707 “Triangle” area,
4 proved difficult to meet free release levels; elevated radioactivity continued to be found in post-
5 remediation samples despite repeated efforts at remediation. Tetra Tech chose not to incur the
6 additional costs of cleanup and have payment delayed. Rather, the management of Tetra Tech
7 directed HPs to engage in fraud.¹¹⁴

8 Tetra Tech was also aware that HPs had an incentive to go along with the fraud. They
9 were paid both a salary and a generous tax-free per diem, adding up to substantial compensation.
10 In addition, the cleanup was slated to last for years, making a job at the Shipyard unusually stable,
11 unlike the short stints HPs were used to during nuclear plants temporary shut-downs. Money and
12 stability were powerful inducements to be complicit in the management-directed fraud rather than
13 to challenge improper practices, no matter how wrong they were.¹¹⁵ In addition to these
14 inducements, Tetra Tech also kept HPs in line with threats. Management compelled HPs to
15 engage in fraud or be fired.¹¹⁶ Nevertheless, some HPs quit rather than be complicit in Tetra
16 Tech’s wrongdoing. Others felt so remorseful about complying with their supervisors’ orders that
17 they “blew the whistle” after they left the Shipyard. These HPs are the whistleblowers whose
18 declarations under penalty of perjury support this petition as well as the NRC petition.

19 In addition to emphasizing profits at the expense of safety, going so far as to order
20 fraudulent practices over the years with this combination of “carrots and “sticks,” Tetra Tech
21 created a company culture and practices that deterred discovery of, and cover up, of the fraud.

22 Its Radiological Safety Department, for example, was not sufficiently independent of the
23 Construction Department. The perceived needs of the Construction Department to speed up work
24 and cut costs overrode proper radiological practices.¹¹⁷

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26 ¹¹⁴ Exhibit 7 at ¶¶ 7-11, 15-20, 24-31.

27 ¹¹⁵ *Id.* at ¶¶ 34.

28 ¹¹⁶ *Id.* at ¶¶ 7, 15-32, 34; Exhibit 13 at ¶¶ 13-15, 30-35, 39, 52-55.

¹¹⁷ Exhibit 14 at ¶¶ 11-15, 51-52. Exhibit 13 at ¶¶ 30-35; 40-51.

1 Tetra Tech’s management also cultivated favoritism: preferred people were made senior
2 HPs and supervisors despite not having the experience necessary for those positions.¹⁰⁴ Lack of
3 qualified supervisors contributed to slipshod and fraudulent work by the HPs working for them,
4 seriously compromising sampling and remediation.

5 Critically, the company also devised a deliberate system for covering up improper
6 practices. HP supervisors had an “early warning system,” which alerted them when the chief
7 onsite radiological safety officer was about to come out to the field. Thus alerted, employees
8 knew when not to continue to make apparent that they were engaging in fraudulent practices, at
9 least until the officer went back to his office.

10 Furthermore, managers were nearly all from outside the San Francisco Bay Area. They
11 expressed little concern that residual radioactive contamination might remain on the Shipyard
12 because of a “we’re not going to live here” attitude.¹¹⁸

13 14 **IV. THE STATE MATERIALS LICENSES SHOULD BE REVOKED**

15 This petition is filed pursuant to 17 Cal.Code of Regulations section 30205, which
16 governs licensing of entities engaged in handling radioactive material. It provides, in pertinent
17 part, that “[a]ny license may be . . . revoked by the department: for any material false statement in
18 the application or in any required report; because of conditions revealed by any means which
19 would warrant refusal to grant such a license on an original application; or for violation of any
20 terms and conditions of the Act . . . or of any relevant regulation.”¹¹⁹

21 Revocation of Tetra Tech’s license is more than warranted on numerous grounds.
22 Independently or together, they constitute “conditions” which would “warrant refusal to grant” a
23 state radiological license under section 30205. First, the extensive fraud and cover-up that
24 spanned years and was directed by management constitutes conditions, had they existed at the
25 time of the license application, which would warrant refusal to grant a license. Tetra Tech
26

27 ¹¹⁸ Exhibit 7 at ¶ 34; Exhibit 13 at ¶ 59.

28 ¹¹⁹ 17 C.C.R. § 30205(b).

1 undoubtedly committed shocking, outrageous and deliberate acts that went to the very integrity of
2 the sampling and cleanup in disregard for community safety.

3 Second, Tetra Tech’s internal “investigation” was a whitewash; its assurances that the
4 fraud was of narrowly limited scope was false. Furthermore, the data review confirms the extent
5 of the fraud was far greater than Tetra Tech has ever admitted. In fact, Tetra Tech continues to
6 deny that it has committed the widespread fraud attested to by former HPs’ sworn declarations.

7 Third, Tetra Tech’s deliberate actions harmed the public. The extensive and costly
8 cleanup must now be redone, not only increasing the cost of the cleanup to the public, but also
9 prolonging the Hunters Point community’s potential exposure to nuclear waste. Moreover, untold
10 amounts of contaminated soil, likely untraceable, is now in either landfills not licensed to receive
11 nuclear waste, or has been used in places unknown, potentially exposing the unwary public to
12 harm for as long as the radioactivity remains. A company that causes such extensive public harm
13 would never have been given a license, and thus revocation is warranted.

14 Fourth, Tetra Tech’s fraud, and the fact that the Navy and regulators permitting it to
15 happen, has significantly corroded the community’s trust in the intention of the Navy to fully
16 clean up the Shipyard and in its competence to do so. Indeed, at a public hearing before a Board
17 of Supervisors committee meeting on May 14, 2018, community members testified they felt lied
18 to by the Navy and regulators.¹²⁰ Revoking the state license could, to some extent, assist in
19 restoring the public’s trust in the cleanup.

20 Fifth, a separate federal materials license granted to Tetra Tech is still extant: NRC has
21 not acted on Greenaction’s petition. Thus, the State should act to prevent Tetra Tech from
22 continuing to do radiological work in California while awaiting action by the NRC.

23 Finally, under these circumstances, revocation is one of the few remedies – perhaps the
24 only remedy – that may deter Tetra Tech itself, Tetra Tech’s parent company, and other licensees.

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26
27 ¹²⁰ <https://www.sfchronicle.com/bayarea/article/In-Hunters-Point-Shipyard-cleanup-scandal-supes-12914669.php>.

1 Revocation here would serve as a warning to Tetra Tech and others and protect other
2 communities in similar situations.

3 Based on all of these factors, there can be no doubt that the Radiological Health Branch
4 would never have licensed Tetra Tech. Thus, the standard imposed by section 30205 has been
5 met, and Tetra Tech's license should be revoked.

6 7 **V. CONCLUSION**

8 After years of denying the extent of fraud, the Navy has finally concluded Tetra Tech's
9 misconduct was so extensive that all its data must be discarded. According to US EPA and state
10 regulators, up to 97% of the soil-sampling results are suspect. Tetra Tech's deliberate misconduct
11 demonstrates it is unworthy of a state radiological license. Greenaction respectfully requests that
12 it be revoked as an appropriate sanction to hold Tetra Tech responsible for, among other things,

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1 its abject fraud in reckless disregard for the health and wellbeing of the Bayview Hunters Point
2 neighborhoods and beyond and to deter others from engaging in similar fraudulent conduct.

3 Respectfully submitted,
4
5

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10 _____
11 Steve Castleman
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Dated: July , 2018

12 * Jordan Davis was a law student certified under the
13 California State Bar *Rules Governing the Practical*
14 *Training of Law Students* and participated in the
drafting of this petition until May 31, 2018, when
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